

XX. *The Blind Coleoptera of Australia and Tasmania.*

By ARTHUR M. LEA, F.E.S., Government Entomologist, Tasmania.

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BLIND Coleoptera in Australia are principally to be taken under stones, or at the roots of beach-growing plants. In other parts of the world many species have been taken in caves, but so far no one has so taken them in Australia, although they have been specially searched for on several occasions. I have myself searched for them without success in caves in Western Australia, New South Wales, and Tasmania. The total number of blind species (including one now first described) recorded from Australia and Tasmania is but eight (four from Tasmania, two from New South Wales, and two from Western Australia, a number probably far short of the total to be obtained by diligent searching. All the species are of small size with, as elsewhere, the body apterons and elytra soldered together.

Following are given notes on all the known species.

CARABIDÆ.*

ILLAPHANUS STEPHENSI, Macl.

In company with Messrs. H. J. Carter and E. Ferguson at Otford, my brother (Mr. A. H. T. Lea) at Watson's Bay near Sydney and Mr. R. Helms, also at Watson's Bay, I have recently (April 1905) taken specimens of this interesting little species. The original locality was Wollongong, but the late Rev. R. L. King also took the species at Parramatta and Mr. H. W. Cox has taken it at the Lane Cove River. It is thus fairly widely distributed, and that

* *Steganomma porcatum*, Macl., was recorded (P. L. S., N.S.W., 1904, p. 60) as blind, but it really has eyes, although these are small and very difficult to find.

it has not been taken more frequently must be put down to its small size and to its habit of clinging to the under surface of deeply buried stones, which in the ordinary way would seldom be turned over in the search for insects. We found it necessary in searching for it to kneel on the ground and closely examine every inch of the surface of the stones turned over, as the insects, although fairly active when in motion, are not always ready to move, and their minute size and dingy colour render them very inconspicuous. The stones favoured by them are nearly always of fairly large size and are always deeply buried in damp (but not wet) places, and it generally takes two men to turn them over.

The upper surface is clothed in sparse short pale pubescence, but this is almost invisible, except from the sides. The original figure is not a very good one.

Some specimens taken at Watson's Bay appear to represent a variety, as they differ from normal specimens (in the company of which they were taken) in being decidedly larger (much smaller than *macleayi*, however), darker in colour, more parallel-sided, the cephalic impressions less marked and the median line of the prothorax more distinct.

ILLAPHANUS MACLEAYI, n. sp.

Pale testaceous, appendages still paler. Clothed with short and very sparse pubescence; a long seta on each side of the prothorax towards both apex and at base; head with two setæ on each side behind antennæ.

Head slightly longer than wide, obtusely longitudinally impressed on each side of middle, sides from antennæ to base gently curved. Antennæ extending to hind coxæ, two basal joints stout, first almost as long as second and third combined, second distinctly longer and stouter than third, third to tenth more or less head-like, eleventh slightly wider and about twice the length of tenth. *Prothorax* distinctly wider than head, not much wider than long, apex incurved to its middle, sides rounded in front and slightly incurved to base, base strongly bisinuate; median line narrow and distinct; impunctate. *Elytra* distinctly wider than prothorax, more than twice as long as wide, not quite covering tip of abdomen, sides gently diminishing in width to base and rather more noticeably to apex, margins finely channelled throughout, densely but obscurely punctate. *Mesosternal epimera* wide. *Legs* strong; front tibiæ strongly dilated and deeply

notched towards apex, the others slightly dilated and not notched ; tarsi rather short. Length $1\frac{1}{2}$ to 2 mm.

Hab. N. S. WALES, Otford. (*H. J. Carter* and *A. M. Lea.*)

The male differs from the female* in being smaller, with stouter legs, longer antennæ, and wider front tarsi. The two specimens described were taken under small but deeply buried stones in a small gully near the Otford railway station. The pubescence can only be seen distinctly from the sides; the setæ are also by no means distinct.

Readily distinguished from *I. stephensi* by its much greater size, and by the absence of the strong elytral striæ so noticeable in that species. Other differences are that in *stephensi* the prothorax at its widest is very little wider than the head or narrower than the elytra, and that its apex is considerably wider than its base and its sides with less sinuous outlines.

COLYDIIDÆ.

ANOMMATUS 12-STRATUS, Müll.

This minute British species I have taken at the roots of grass in Hobart. Specimens must be common, although seldom seen, as I obtained nineteen living specimens and fragments of many others by the use of sieves. The plan adopted was to break up the earth for about three inches from the surface, this was then thrown into water and stirred about; every thing that floated was picked out, dried, and afterwards put through sieves, the rubbish that came through the finest sieves being gone over on white paper in the ordinary way. The specimens would often remain for minutes together without moving, and even when they did move would walk at a very slow rate.

SCARABÆIDÆ.

PHYCOCHUS GRANICEPS, Broun.

In Hobart, obtained at the roots of plants (usually the bracken fern) growing close to the sea-beach. I have seen

* The type female has been returned to Mr. Carter.

very few living specimens, but many dead ones. Mr. J. J. Walker (who first took it at Hobart, in June 1901) informs me that in New Zealand he obtained many specimens under old logs partially buried in the sand of sea-beaches.

PHYCOCHUS SULCIPENNIS, Lea.

Obtained at Hobart in company with the preceding species, than which it is rather more numerous.

CURCULIONIDÆ.

HALORHYNCHUS GENICULATUS, Lea.

Numerous specimens of this species were obtained at the roots of a small species of salt-bush (*Atriplex*) growing just above high-water mark on the outer beach at Geraldton (Champion Bay). They remained quite motionless for a considerable time after being exposed.

HALORHYNCHUS CÆCUS, Woll.

I repeatedly searched for this species at Cottesloe and other beaches close to Fremantle (the original locality) but never found more than two specimens; these were taken at the roots of a species of spinifex grass.

TASMANICA MYRMECOPHILA, Lea.

The type specimen of this species was obtained in Hobart under a stone in the nest of an ant. No other specimen has been recorded, although the species has been repeatedly searched for; but there is a minute specimen in the Australian Museum (from the late Rev. R. L. King's collection, without locality label, but probably taken about Parramatta) which may belong to the species. The specimen in question is old and dirty, but I could see no eyes in its head, and from memory it struck me as probably being *T. myrmecophila*.